



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

Stephen F. Rutkowski et al.

Serial No.: 10/622,063

Filed: July 17, 2003

For: ROBOTIC PEN

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Group Art Unit: 1734

Examiner: Koch, George R.

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Lynda Howell

PRE-APPEAL BRIEF REQUEST FOR REVIEW

In respect to the Final Office Action of February 10, 2006, Appellants respectfully submit this Pre-Appeal Brief Request for Review. This Request is being filed concurrently with a Notice of Appeal.

The Examiner rejected pending claims 1-3, 11, and 24 under 35 U.S.C. §103(a). Of these, claims 1, 11, and 24 are independent. In the Final Office Action mailed on February 10, 2006, the Examiner essentially reiterated the rejection formulated in the previous non-final Office Action. Because the Appellants believe that the rejections are improper, the present Appeal has been filed.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-3, 11, and 24 under 35 U.S.C. 103(a) as being unpatentable over Ishida et al., (U.S. Patent 5,932,012, hereinafter “Ishida”) in view of Barrey et al., (U.S. Patent 6,197,115, hereinafter “Barrey”) and Chikahisa et al. (U.S. Patent 6,562,911, hereinafter “Chikahisa”). Claims 4-6, 12, 17-23, and 25-26 were objected to as being dependent upon a rejected base claim. Rejected claims 1, 11, and 24 are independent and will be discussed in detail below.

The independent claims 1, 11, and 24 recite, in generally similar language, a robotic pen comprising a machine having a stage for mounting a workpiece for rotation and orthogonal translation. The stage permits translation generally in a plane and is rotatable about an axis generally parallel to the plane.

In the Final Office Action, the Examiner maintained the same rejection of claims as formulated in the previous Office Action. The Examiner argued that Barrey discloses a stage or end “effector” for permitting translation generally in a plane and rotation about an axis generally parallel to the plane. Further, the Examiner contended that the multi-axis robot structure of Barrey allows for the application of sealant to a surface that lies in 2 or more dimensional planes with a smooth and consistent motion, and therefore that it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a robot stage as in Barrey for the X-Y table of Ishida in order to apply coatings such as sealant to a surface that lies in 2 or more dimensional planes.

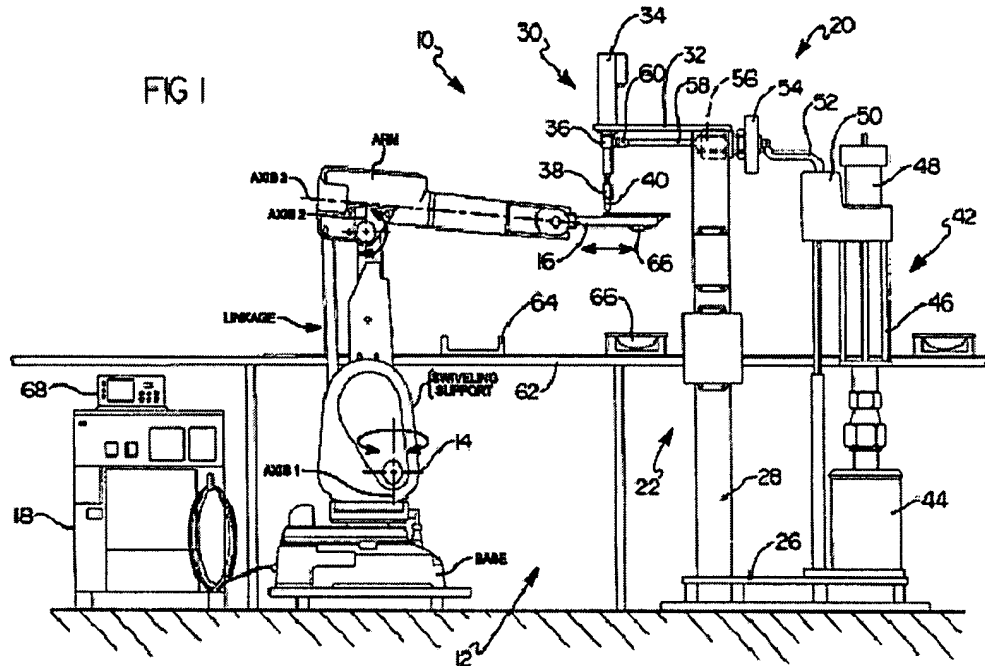
In Response to Applicants’ arguments in the previous non-final Office Action, the Examiner also argued that robot of Barrey has 6-axes of motion, and that such robots are well understood in the art as being capable of being moved any point and angle, and inherently are capable of being moved such that it permits translation in a plane and rotation about an axis generally parallel to the plane.

This analysis is simply incorrect. The Examiner apparently based this overbroad statement on the abstract and a short passage of Barrey. The Examiner has not carefully considered how the robotic sealant dispenser of Barrey works. Barrey does disclose six axes of motion provided by the robotic manipulator. However, this fact alone is of no consequence; many such “six axis” robots exist that do not provide the type of motion claimed. Barrey does not disclose that the robotic manipulator is rotatable about an axis generally parallel to the translational plane.

An illustration of the translational plane and the rotational axis generally parallel to the translational plane is provided in FIG. 1 of the present application. As discussed in paragraph 18 of the application, the workpiece stage includes a first table for translating the workpiece in a first linear axis X, and a second table mounted atop the first table for translating the first table and workpiece in a second linear axis Y. The second axis Y is orthogonal to the first axis X for two-plane mounting and translation of the workpiece. The machine further includes a rotary spindle suitably mounted atop the first table for mounting the workpiece for precision rotation thereof in a first rotary axis A. It is clearly evident that the rotary axis A is parallel to the translation plane X-Y.

Because Ishida does not describe a stage that permits translation generally in a plane and rotation about an axis generally parallel to such a plane, the examiner relied upon the teachings of Barrey. The rejection cannot stand if Barrey does not show a workpiece mounting stage that permits translation generally in a plane and rotation about an axis generally parallel to that plane.

Figure 1 of Barrey is reproduced below with certain annotations made to facilitate the present analysis.



Barrey, Fig. 1

Barrey describes a robotic manipulator 14 that supports a gripping tool 16. Barrey does not describe in any detail the particular motion of the components of the robotic manipulator, although these are key to understanding how the arrangement moves the gripping tool 16 (and any workpiece that would be positioned on the tool).

It is clear from FIG. 1 of Barrey that the robotic manipulator includes a base, a swiveling support that is rotatable about an of the base (labeled “axis 1” in the figure above), and an arm coupled via a linkage to the swiveling support. The arm may be raised or lowered about a horizontal axis (labeled “axis 2” in the annotated figure). The gripping tool is coupled to the arm. The gripping tool may be extended or retracted along a longitudinal axis (labeled “axis 3” in the figure).

However, Barrey fails to describe that the gripping tool is *rotatable about the longitudinal axis of the arm (i.e., axis 3)*. That is, the plane of translation of the gripping tool 16, following the recitations of the pending independent claims, would be the plane defined by the extension and retraction along axis 3 of the arm. No teaching is provided, however, that the tool can be rotated about that axis. Indeed, given the type of robotic device illustrated in Barrey, those skilled in the art would conclude that it is not intended to provide for rotation in this manner. Such rotation is apparently not an issue in Barrey, as the entire purpose of the arrangement is to spread an adhesive on a workpiece that is held on the (flat) gripping tool 16.

Because Barrey does not describe a workpiece mounting stage that permits translation generally in a plane and rotation about an axis generally parallel to the plane, and further because Ishida and Chikahisa do not obviate these deficiencies, the combination of teachings cannot support a *prima facie* case of obviousness of independent claims 1, 11, and 24. Thus, reconsideration and allowance of all pending claims are requested. The claims depending directly or indirectly from these independent claims are also believed to be clearly patentable by virtue of their dependency from an allowable base claim, and for the subject matter they separately recite. Their reconsideration and allowance are also requested.

For all of the above reasons, Appellants respectfully request that the Panel instruct the Examiner to withdraw the outstanding rejections and allow the pending claims.

Respectfully submitted,

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